INSTRUCTIONS

-J03555 REV. 2006-12-07

ROAD TECH™ QUEST™ GLOBAL POSITIONING SYSTEM (GPS) MOUNTING KIT

GENERAL

Kit Number

92109-05

Models

This kit is needed to complete the installation of a Road Tech™ Quest™ GPS System Kit on specific model motorcycles. Please see the P&A Retail Catalog or the Parts and Accessories section of www.harley-davidson.com (English only) for model fitment information and the correct GPS System Kit part number.

Additional Parts Required

Separate purchase of additional parts or accessories may be required for proper installation of this Mounting Kit on your model motorcycle. Please see the P&A Retail Catalog or the Parts and Accessories section of www.harley-davidson.com (English only) for a list of required parts or accessories for your model.

⚠WARNING

The rider's safety depends upon the correct installation of this kit. Use the appropriate service manual procedures. If the procedure is not within your capabilities or you do not have the correct tools, have a Harley-Davidson dealer perform the installation. Improper installation of this kit could result in death or serious injury. (00333a)

NOTE

This instruction sheet references Service Manual information. A Service Manual for your model motorcycle is required for this installation and is available from a Harley-Davidson Dealer.

Electrical Overload

CAUTION

It is possible to overload your motorcycle's charging system by adding too many electrical accessories. If your combined electrical accessories operating at any one time consume more electrical current than your vehicle's charging system can produce, the electrical consumption can discharge the battery and cause vehicle electrical system damage. See a Harley-Davidson dealer for advice about the amount of current consumed by additional electrical accessories, or for necessary wiring changes. (00211b)

⚠WARNING

When installing any electrical accessory, be certain not to exceed the maximum amperage rating of the fuse or circuit breaker protecting the affected circuit being modified. Exceeding the maximum amperage can lead to electrical failures, which could result in death or serious injury. (00310a)

The Road Tech Quest requires up to **210 milliamps** additional current from the electrical system.

Kit Contents

See Figure 4 and Table 1.

INSTALLATION

NOTE

Do not use solvent-based chemicals or waxes directly on the plastic or rubber components as they can affect the overall performance and appearance of the plastic and rubber.

For 2003 and earlier models

⚠WARNING

To prevent accidental vehicle start-up, which could cause death or serious injury, disconnect negative (-) battery cable before proceeding. (00048a)

1. Refer to the Service Manual and follow the instructions given to remove the seat and disconnect the negative battery cable. Retain all seat mounting hardware. Proceed to Step 2.

For 2004 and later models

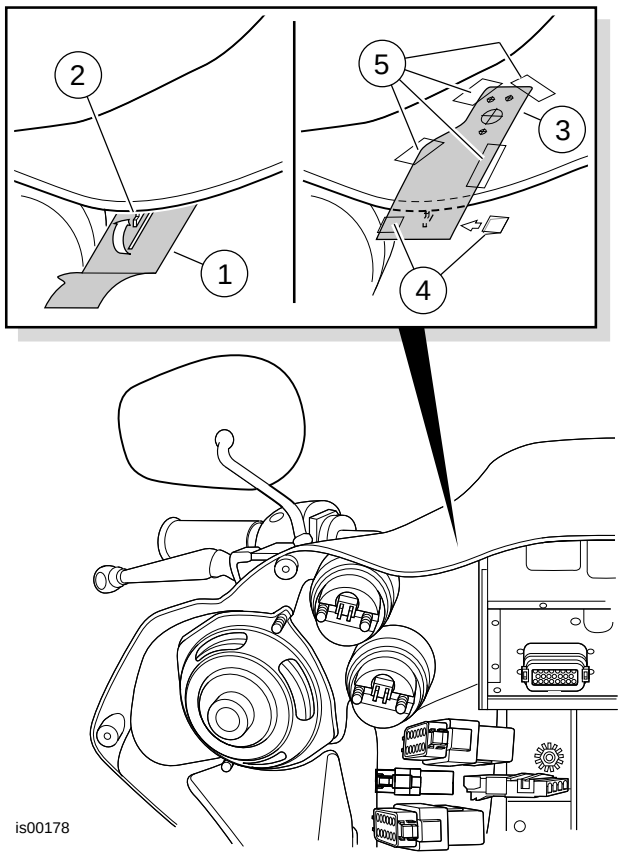
⚠WARNING

To prevent accidental vehicle start-up, which could cause death or serious injury, remove maxi-fuse before proceeding. (00251a)

1. Refer to the Service Manual and follow the instructions given to remove the maxi-fuse. Proceed to Step 2.

Installing the Hot Shoe

2. Remove the outer fairing and windshield. Refer to OUTER FAIRING/ WINDSHIELD (FLTR): REMOVAL in the Service Manual.



1. **Orange template**
2. **Hook template slot onto fairing rib**
3. **Fold template over fairing**
4. **Tape template square**
5. **Tape template to fairing**

Figure 1. Position Template for Drilling

3. See Figure 1. Obtain the orange-colored drilling template (1) from the kit. Slide the slot (2) of the template over the rib on the underside of the inner fairing until the slot bottoms out against the forward edge of the rib. Fold (3) the template over the top of the fairing as shown. Tape (4) the two halves of the template together near the fold to ensure that the template remains square during the drilling process, then tape (5) the template to the fairing to hold it in position.

4. See Figure 4. Obtain the Road Tech Quest unit (A) and cradle mount (B) from the Road Tech Quest GPS System Kit (sold separately).

5. Rotate the antenna (J) on the Road Tech Quest unit upward **at least** 90 degrees. Slide out the locking lever (K) located on the right side of the cradle mount.

6. Position the Road Tech Quest unit above the cradle mount, aligning the slots (L) on the sides of the unit with the tabs (M) on the inside of the mount.

7. Slide the Road Tech Quest unit downward into the cradle mount until it snaps into place. Release the lever. The spring return should close the lever and secure the unit. Verify complete closure by gently pressing on the lever after releasing. Rotate the antenna back to the horizontal position.

8. Obtain the Hot Shoe (1) from the kit. Align the cradle mount with the Hot Shoe so that the grooves (I) in the Hot Shoe slide easily into the cradle mount. Slide the cradle mount back into the Hot Shoe until you hear two sharp "clicks".

NOTE

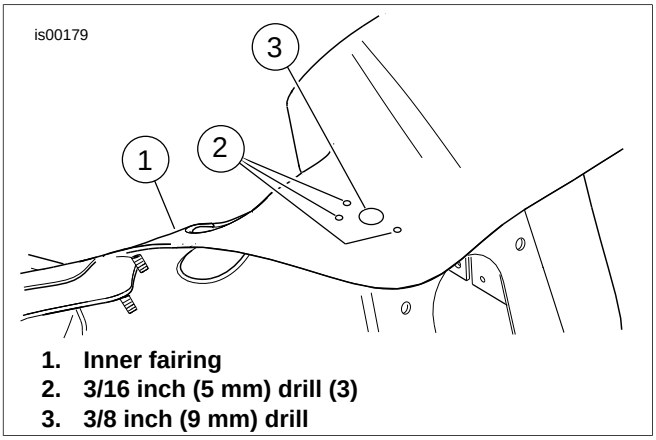
If you hear only one click, the cradle mount is not seated completely in the Hot Shoe.

9. Place the Road Tech Quest unit, cradle mount and Hot Shoe assembly over the template, lining up the holes with the locations marked on the template. Verify that there is adequate clearance between the left side of the Road Tech Quest unit and the curve of the fairing as it rises over the radio. Repeat the template positioning procedure in Step 3 as required to ensure sufficient clearance before proceeding.

10. Mark the four hole centers shown on the template with a centerpunch.

11. Using a 1/16 to 1/8 inch (1.5 to 3 mm) diameter bit, drill pilot holes in the locations of the four punch marks.

12. See Figure 2. Drill a 3/16 (5 mm) hole at each of the three pilot holes indicated on the template. Drill a 3/8 in. (9 mm) diameter hole at the remaining pilot hole as shown on the template. Remove the template.



1. **Inner fairing**
2. **3/16 inch (5 mm) drill (3)**
3. **3/8 inch (9 mm) drill**

Figure 2. Hot Shoe Mounting Holes

13. While pressing downward on the release tab (N) on the top of the cradle mount, pull the assembled Road Tech Quest unit and cradle mount from the Hot Shoe and set it aside.

14. See Figure 4. Obtain the gasket (2), back plate (3) and three screws (4) from the kit.

15. Fit the gasket to the underside of the Hot Shoe. Feed the two wires connected to the Hot Shoe through the larger hole drilled earlier. Seat the Hot Shoe to the fairing, lining up the holes.

16. Position the back plate to the underside of the fairing, lining up the three small mounting holes and fitting the wires through the large hole.

17. Holding the back plate in place, insert the screw threads through the holes in the Hot Shoe and the fairing, and thread them into the holes in the back plate. Tighten the screws securely.

18. Snap the cover (5) into the top of the Hot Shoe.

Routing and Connecting the Wiring

19. Obtain the fuse holder harness (6) and heat shrink tube (8) from the kit. Slide the heat shrink tube onto the black wire on the fuse holder harness.

20. Crimp the butt splice of the black wire from the fuse harness to the red wire of the Hot Shoe harness. Refer to the SEALED BUTT-SPLICE CONNECTORS section of the Service Manual for crimping instructions.

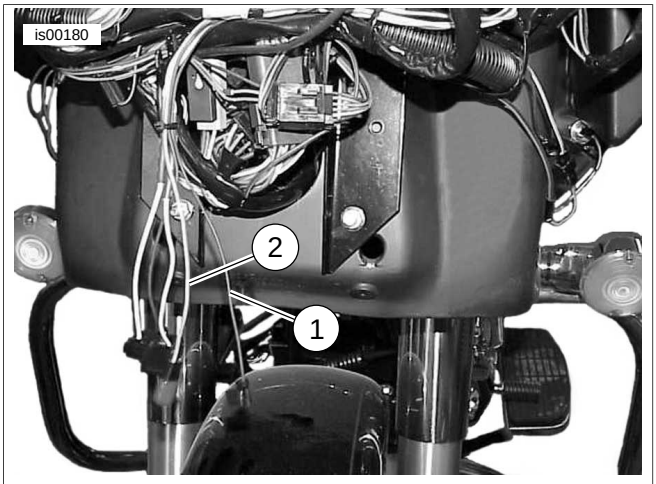
21. Slide the heat-shrink tube (installed earlier) over the splice area.

⚠WARNING

Be sure to follow manufacturer's instructions when using the UltraTorch UT-100 or any other radiant heating device. Failure to follow manufacturer's instructions can cause a fire, which could result in death or serious injury. (00335a)

- **Avoid directing heat toward any fuel system component. Extreme heat can cause fuel ignition/ explosion resulting in death or serious injury.**
- **Avoid directing heat toward any electrical system component other than the connectors on which heat shrink work is being performed.**
- **Always keep hands away from tool tip area and heat shrink attachment.**

22. Use the radiant-heating device to shrink the heat-shrink tubing to the wires and splice.



1. Black (ground) wire
2. Orange/ white wire

Figure 3. Wires for Hot Shoe Connection

23. See Figure 3, and the INTERCONNECT HARNESS wiring diagram in the Service Manual. Proceed according to the availability of the black (1) and orange/ white (2) wires of the position lamp circuit [29B] of the interconnect harness, located near the headlamp:

If the wires of circuit [29B] are unused, and the tab connectors on the wire ends are intact:

a. Remove the tape tying the black (1) and orange/ white (2) wires of circuit [29B] to the interconnect harness.

b. Connect the orange/ white wire from the fuse holder harness to the orange/ white wire of the unused position lamp circuit [29B].

c. See Figure 4. Obtain tab housing (10) from the kit. Fit the housing onto the tab terminal on the black wire from the Hot Shoe.

d. Connect the black wire from the Hot Shoe to the black wire of circuit [29B].

If the wires of circuit [29B] are already in use:

a. Disconnect any existing accessories from connector [29B] of the interconnect harness.

b. Obtain the multiple accessory "Y" harnesses (items G and H, sold separately).

c. Connect the single-terminal end of each harness to the corresponding color wire terminal on connector [29B].

d. Connect all accessories to the two available connectors on each "Y" harness.

24. Obtain the 2 Amp fuse (7) from the kit, and open the cover of the fuse holder on the fuse holder harness. Plug the fuse into the fuse holder, and close the cover.

25. Plug the 3.5 mm stereo jack (with rubber boot attached) on the speaker/ audio cable (C) into the AUX-IN port on the front of the radio.

NOTE

When installing the jack plug to the radio port socket,

- *roll back the outer lip of the rubber seal,*
- *install the plug into the port on the front of the radio,*
- *gently roll the seal back to its original shape to form a seal over the radio port.*

This will help eliminate "spring-back" of the plug out of the socket.

26. Plug the 3.5 mm mono jack (without rubber boot) into the audio receptacle on the Hot Shoe.

27. Route the speaker/ audio cable down the fairing to the radio, and secure using adhesive clips (D) from the Road Tech Quest GPS System Kit. Mount the adhesive clips to the face of the inner fairing so that the cable routing is inconspicuous, does not obscure the gauges and will not catch on any part of the motorcycle while riding.

28. Use the three tie straps (9) from **this** kit to keep the wires clear of gauges and other items under the fairing.

29. Install the Road Tech Quest unit and cradle mount into the Hot Shoe per the procedures that follow this section.

NOTE

To prevent possible damage to the sound system, verify that the Ignition/ Light Key Switch is in the OFF position before re-installing the maxi-fuse or negative battery cable.

30. Verify that the Ignition/ Light Key Switch is in the OFF position.

    For 2004 and later models: Refer to the Service Manual and follow the instructions given to re-install the maxi-fuse.

    For 2003 and earlier models: Refer to the Service Manual and follow the instructions given to re-attach the negative battery cable and install the seat.

31. Test the Road Tech Quest unit and the rest of the sound system for proper operation.

32. Re-install the outer fairing and windshield. Refer to OUTER FAIRING/ WINDSHIELD (FLTR); INSTALLATION in the Service Manual.

⚠WARNING

After installing seat, pull upward on seat to be sure it is locked in position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070b)

INSTALLING THE ROAD TECH QUEST UNIT INTO THE CRADLE MOUNT

1. See Figure 4. Obtain the Road Tech Quest unit (A) and cradle mount (B) from the Road Tech Quest GPS Kit (sold separately).

2. Rotate the antenna (J) on the Road Tech Quest unit upward **at least** 90 degrees. Slide out the locking lever (K) located on the right side of the cradle mount.

3. Position the Road Tech Quest unit above the cradle mount, aligning the slots (L) on the sides of the unit with the tabs (M) on the inside of the mount.

4. Slide the Road Tech Quest unit downward into the cradle mount until it snaps into place. Release the lever. The spring return should close the lever and secure the unit. Verify complete closure by gently pressing on the lever after releasing. Rotate the antenna back to horizontal.

INSTALLING THE ROAD TECH QUEST UNIT AND CRADLE MOUNT INTO THE HOT SHOE

1. Align the cradle mount with the Hot Shoe so that the cradle mount slides easily over the grooves (I) in the Hot Shoe. Slide the cradle mount forward into the Hot Shoe until you hear two sharp "clicks".

NOTE

If you hear only one click, the cradle mount is not seated completely in the Hot Shoe.

OPERATING THE ROAD TECH QUEST UNIT

NOTE

Do not use solvent-based chemicals or waxes directly on the plastic or rubber components as they can affect the overall performance and appearance of the plastic and rubber.

Refer to the instructions that came with the Road Tech Quest.

REMOVING THE ROAD TECH QUEST UNIT

To remove the Road Tech Quest unit from the motorcycle when not in use or when leaving the vehicle unattended:

1. While pressing downward on the release tab (N) on the top of the cradle mount, pull the assembled Road Tech Quest unit and cradle mount from the Hot Shoe.

2. Store the assembled Road Tech Quest unit and attached cradle mount in the case provided.

SERVICE PARTS

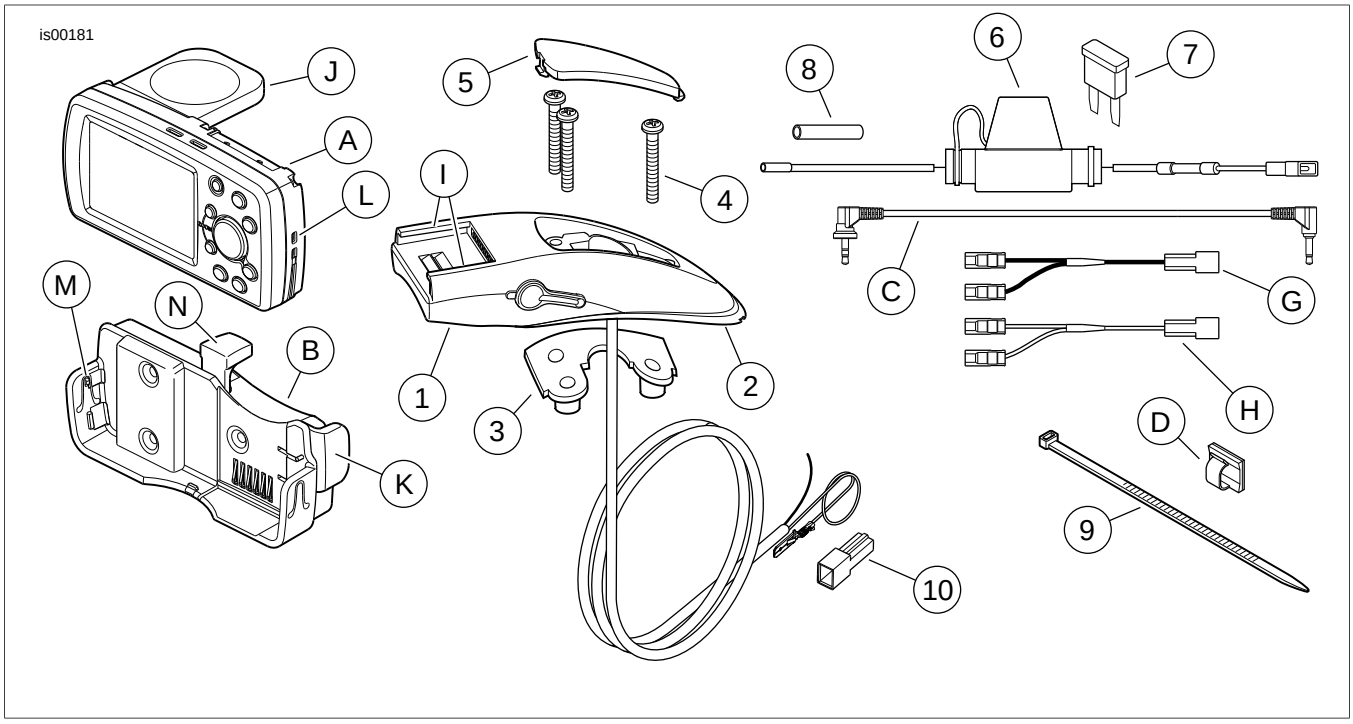


Figure 4. Service Parts, J03555

Table 1. Service Parts Table

Kit	Item	Description (Quantity)	Part Number
Kit 92109-05 Road Tech Quest GPS Mount	1	Hot Shoe	Not sold separately
	2	Gasket, Hot Shoe	Not sold separately
	3	Back plate, Hot Shoe	Not sold separately
	4	Screw, #8-32 x 1-1/4 in. (31.8 mm) long, with lock patch (3)	3352
	5	Cover, Hot Shoe	Not sold separately
	6	Harness, fuse holder	91724-04
	7	Fuse, blade type, 2 Amp	54305-98
	8	Heat shrink tube, 1-1/4 in. (31.8 mm) long	Not sold separately
	9	Cable strap (3)	10006
	10	Tab housing	72053-92
Items mentioned in text, but not included in kit:			
Kit 92106-05 Road Tech Quest GPS System, North America	A	Road Tech Quest unit (North America)	Not sold separately
	B	Cradle mount	92108-05A
	C	Speaker/ audio cable	92153-05
	D	Clip, adhesive (3)	10271
	E	Case, Road Tech Quest unit (not shown)	92147-05
	F	Owner's manual, Road Tech Quest unit (not shown)	Not sold separately
Kit 92104-05 Road Tech Quest GPS System, Europe	A	Road Tech Quest unit (Europe)	Not sold separately
	B	Cradle mount	92108-05A
	C	Speaker/ audio cable	92153-05
	D	Clip, adhesive (3)	10271
	E	Case, Road Tech Quest unit (not shown)	92147-05
	F	Owner's manual, Road Tech Quest unit (not shown)	Not sold separately
Kit 92129-05 Road Tech Quest GPS System, Australia	A	Road Tech Quest unit (Australia)	Not sold separately
	B	Cradle mount	92108-05A
	C	Speaker/ audio cable	92153-05
	D	Clip, adhesive (3)	10271
	E	Case, Road Tech Quest unit (not shown)	92147-05
	F	Owner's manual, Road Tech Quest unit (not shown)	Not sold separately
	G	Harness, multiple accessory (black)	70458-05
	H	Harness, multiple accessory (orange/ white)	70459-05
Reference items mentioned in text			
	I	Grooves in Hot Shoe	
	J	Antenna	
	K	Locking lever	
	L	Slots in Road Tech Quest unit	
	M	Tabs inside cradle mount	
	N	Release tab	